A.Bid Submittal Includes: All labor, materials, tools, transportation services, supervision, coordination, etc., necessary to provide and install a fully functional audiovisual system, as described in this specification and on the associated contract drawings. The system includes, but is not limited to the following:

- Audio equipment: Speakers, mixers, amplifiers, signal processing equipment, and source equipment.
 Video Equipment: Flat panel displays, video source equipment, video switching equipment Remote Control Equipment: Interface hardware, software, and programming.
 Equipment racks and associated hardware.
 Cables, connectors, plates, and wiring.
 Mounts, rigging, trapezes and required hardware for above items such as all-thread, unistrut, chains, and cables.

B. Audiovisual schematics provided with the contract drawings only and are not to be considered actual wiring details. are intended to repre ent design intent

1.3 SUBMITTALS

A.Bid Submission: Submit a complete and accurate listing of all equipment to be used in assembling the system(s). Clearly identify equipment not listed in the Specification (either substitute equipment or additional equipment required to meet the design intent).

B.Separate the cost for the specified systems into a minimum of the following categories:

- Itemized cost of equipment and associated installation.
 Itemized cost of any optional equipment (cost shall be valid for a period of 60 days from the date of bid acceptance).
 Itemized cost of any optional equipment installation (cost shall be valid for a period of 60 days from the date of bid acceptance).
 Cost of an extended warranty. Refer to Section 3.5.

C.Shop & Field Drawings: Submit the following for approval before actual purchase, installation of equipment:

- Schematic drawings of any custom circuitry or proposed system modifications.
 Block diagrams indicating the proposed interconnection of all equipment to be furnished.
 Actual equipment rack layouts.
 Shop drawings for custom fabricated plates or panels. Drawings shall include locations and types of connectors, engraving information, and plate material and color.
 Other information as appropriate or as required in other sections of this Specification.

D.As-Built Drawings: Submit "as-built" versions of all shop & field drawings for approval prior to final acceptance testing. Include cable numbers for all equipment interconnection drawings. See Section 3.

1.4 QUALITY ASSURANCE

A.Contractor Qualifications:

- 1. The Contractor shall be licensed in the District of Columbia to perform the work specified in this
- Specification.

 2. The Contractor shall provide to the owner's representative five (5) references with contact names and valid telephone numbers regarding similar projects successfully completed within the last three (3) years.

 3. The Contractor shall be capable of providing manufacturer-specified installation, programming, training, maintenance and repair for all equipment provided.

 4. The Contractor will be responsible for any required low voltage permits.

PART 2-**PRODUCTS**

2.1 SUBSTITUTIONS

A.Specifications and drawings indicate audiovisual equipment based on specific products indicated. Other manufacturer's equipment with equal size and performance characteristics may be considered. Refer to the attached equipment list.

B.Submit substitution requests during the bid submission phase of the project with manufacturer data sheets indicating the appropriate performance specifications of the equipment. Submit all requests to the Architect minimum of five days prior to the bid due date.

C.Miller, Beam & Paganelli, prior to approval, may require evaluation of substitute equipment. Contractor shall be responsible for the costs of any required evaluation and testing.

D.Any use of substitute equipment shall be at no extra cost to the Courts.

2.2 EQUIPMENT

A.See attached equipment list for each room and associated wiring diagrams located with the Contra Drawings. The equipment list shall be used as the basis of design for preliminary pricing purposes. A equipment selections and wiring schematics shall be reviewed by Miller, Beam and Paganelli prior to purchase by the AV Contractor to incorporate the latest technology and design requirements.

B.Substitute equipment shall meet or exceed the performa equipment and shall be at no additional cost to the Owner.

C.Substitute equipment shall not impact the existing archite ctural or el ectrical designa

D.Coordinate the final color/finish of any exposed equipment prior to purchase. Where all visible product labels.

A.All wiring runs shall be unspliced where possible. Splices

B.Provide plenum-rated cable where required by code.

C.Utilize minimum 22 gauge twisted pair shielded wire for all unbalanced line level connections. Unimum 22 gauge twisted pair shielded wire with a minimum 24 gauge drain wire for all balanced ine-level or microphone level connections. Multi-conductor cable shall provide a 100% shield for expressions. **Utilize**

D.Utilize minimum 18 gauge twisted pair unshielded wire for all speaker level connections. Size and run wire to provide a line loss of less than .5 dB.

E.Acceptable cable manufacturers include Extron, Belden, Liberty, Mogami, Canare, Monster, Comprehensive and West Penn.

F. Arrange, route, and isolate wiring according to signal level to minimize crosstalk, hum, or spurious signals. Wiring categories shall consist of: microphone level (-80 dBm to -20 dBm), line level (-20 dBm to +30 dBm), loudspeaker level (+30 dBm and above), AC power, and DC control or emergency power.

tall all cabling in an orderly and professional manner. Provide service loops to allow access to the

el each and every cable in the system (on both ends) in a clear and permanent manner. Use a labeling system that maintains the same circuit designation from origin to destination.

2.4 Sys stem Description

H.Lab logical

G. Inst

A.See drawing notes.

PART 3 - EXECUTION

3.1 INSTALLATION

A.Coordinate the installation of all equipment, wiring, and associated hardware to be compatible with the work of other trades and with the overall construction completion schedule.

B.Perform installation in strict accordance with standard broadcast practices, the National Electrical Code, and any other governing codes.

C.Keep a complete and accurate set of installation drawings at the job site. Note any changes made during installation on the drawings. Include a final set of as-built drawings with the Operation and Maintenance manuals.

D.Install all equipment following the manufacturers' recommendations and broadcast standards. Adjust and test to assure that all components are functioning properly by themselves and in conjunction with their associated components.

E.Install all equipment in appropriate cabinets or consoles at the locations designated in this document or on the associated contract drawings.

F. Securely fasten and support all equipment without hindering equipment operation. Utilize security screws for all rack mounted hardware. Utilize security hardware for all exposed devices.

G. Securely fasten and support all equipment without hindering equipment operation

H.Permanently label all system controls, equipment, switches, connectors, wall/floor plates, etc. for easy identification. Document all equipment settings that normally do not require readjustment on rack cabinet doors and in the Operation and Maintenance manuals.

Utilize signal and power grounding techniques in accordance with established industry standards, such as set forth in Sound System Engineering by Don Davis.

J. Field-verify the final location of all equipment prior to installation.

3.2 ACCEPTANCE TESTS

A.After preliminary system installation and adjustment, conduct an Acceptance Test with representatives from the Courts and Miller, Beam & Paganelli present.

B.Demonstrate the overall operation of each individual piece of equipment in the system, and of the system as a whole. Demonstrate that equipment functions according to manufacturer's specifications, industry standards, and as stated in this Specification Section.

C.Maintain documentation of all performance tests

D.Establish and mark normal settings for all level controls and record these settings in the Operating nstructions.

E.Following the acceptance testing, Miller, Beam & Paganelli will issue a system punch list to be completed by the installer for final completion of the specified scope of work.

A.Conduct on-site training programs to instruct to operation, basic preventative maintenance, and be a second to the conduct of the conduct o

3.3 SYSTEM TRAINING AND OPERATION ASSISTANCE

B.Provide a nominal 4 hours of training which material to a year following system acceptance.

C.Provide a minimum of two training sessions:

The first session shall occur immediately after operation of each system.
 Provide the second training session approximated and maintenance manuals for the equipment time. This training session will be used to training session will be used to training session will be used to training session.

D.Provide in the bid submittal an hourly rate, valinstallation, for any requested additional training of

3.4 OPERATING INSTRUCTIONS

A.Upon acceptance of the system, provide six not each audiovisual system. Provide three hard continued the system.

1. The manuals shall be clearly indexed and c

- As-built drawings as descrappropriate size to allow all AutoCAD (DWG) and PDF List of provided equipment quantities, rack locations, a Manufacturer's instruction r Manufacturer's service instruction in Manufacturer's warranty information and the service instruction of the service instructio

- 2. Each manual shall also contain a contractor-g proper use of each system in all its normal fur information such as a general description of the terms, instructions for general system operations various video sources for display, routing various intent is for this manual to be a supplement to 3. A draft copy of this guide shall be submitted for the sources.
- 4. Unless otherwise noted, all information on t 5. Upon termination of the warranty period, the Owner with the uncompiled remote control to the control of the control of the warranty period, the control of the control of the warranty period, the control of the

B. The operation guide shall be completed by an

C.Post one additional copy of system specific eq rear door of the main equipment for each individu laminated or in a plastic cover to prevent damage

D.Submit according to Division 1 - General Requ

3.5 WARRANTY AND MAINTENANCE

A.Guarantee the system for a period of one year defective materials, design, workmanship, and im material at no expense to the Owner, provided it crespond to any service calls within 24-hours inclupossible, provide substitute equipment to maintain

B.Provide service calls at quarterly intervals thro maintenance and adjustment. Update firmware o

C. The above warranty shall not void warranties individual warranties valid for greater than one ye

SUBMISSION

D. The above warranty shall not void any rights g

E. The above warranty shall not pertain to existin

F. Provide the cost for an extended service contract in initial warranty. The service contract shall incomaintenance, firmware updates, and Owner direct programming updates as part of this service contracted.

REVISIONS

DRAWINGS ARE FOR INFORMATION ONLY

B

ARCHITECT

District of Columbia Courts H. Carl Moultrie I Courthouse 500 Indiana Avenue, NW Washington, DC 20001

Design Intent Documents for

Interior Improvement to:

KEYPLAN

Clerk of the Superior Court | Suite 2500

SPECIFICATIONS

DESIGN INTENT
DOCUMENTS ONLY: CONSTRUCTION NOT FOR